

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Applicant: Alma L. Burlingame et al.

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Examiner: Meah, Mohammad Y

Title: *Protein O-Sulfonation*

## CERTIFICATE OF TRANSMISSION

I hereby certify that this copy is being transmitted by facsimile to the Comm for Patents 571-273-8300 on July 26, 2006.

Signed

Richard Aron Osman

PROPOSED AMENDMENT

United States Patent & Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Examiner:

Please consider these proposed amendments:

## AMENDMENTS TO THE CLAIMS

1. (currently amended) A method of detecting a post-translational modification of a predetermined protein expressed by a cell, comprising the step of: specifically detecting an O-sulfonation of a serine or threonine residue of the protein, wherein the O-sulfonation is detected using (a) a sulfopeptide-specific antibody, (b) chemical analysis to detect chemically labeled O-serine or O-threonine sulfonation, (c) radiolabeling with  $^{35}\text{SO}_4$  to detect radiolabeled O-serine or O-threonine sulfonation, or (d) mass fragmentation analysis by mass spectrometry.
2. (Original) The method of claim 1, wherein the detected O-sulfonation is detected under a first physiological condition, and is compared with a control O-sulfonation detected under a second physiological condition.

3-10. (Canceled)

11. (currently amended) The method of claim 1 wherein the O-sulfonation is detected using a sulfopeptide-specific antibody.

12. (currently amended) The method of claim 1 wherein the O-sulfonation is detected using chemical analysis to detect chemically labeled O-serine or O-threonine sulfonation.

13. (currently amended) The method of claim 1 wherein the O-sulfonation is detected using radiolabeling with  $^{35}\text{SO}_4$  to detect radiolabeled O-serine or O-threonine sulfonation.

14. (previously presented) The method of claim 1 wherein the O-sulfonation is detected using mass fragmentation analysis by mass spectrometry.

#### REMARKS

These amendments introduce no new matter.

The Examiner is invited to call the undersigned with any suggestions for amending the claims or further clarifying any of the foregoing. Please charge any necessary fees or time extensions relating to this communication to our Dep. Acct. No. 19-0750 (order UCSF04-016).

Respectfully submitted,  
Science & Technology Law Group

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